

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-3. (Canceled)

Claim 4. (Previously Presented) A camera system comprising:

an image pickup device for taking an image formed by light flux from an object;

a luminance sensor for sensing luminance of the object;

a detector for judging whether a proper exposure time of the image pickup device which is calculated by the luminance of the object is longer than a predetermined time period; and

a controller for controlling the image pickup device for taking a plurality of images of the same field of the object by a control exposure time T_2 equal to or shorter than the predetermined time period, when the calculated exposure time is longer than the predetermined time period, wherein the control exposure time T_2 and the number of image taking operations C are shown by the following equations;

$$C = \text{INT}(T_1/T_0) \text{ and}$$
$$T_2 = T_1/C$$

where the symbol T_1 designates the proper exposure time, the symbol T_0 designates a limit exposure time causing a camera shake, and the symbol INT signifies raising fractions to form an integer.

Claim 5. (Previously Presented) A camera system comprising:
an image pickup device for taking an image formed by light flux from an object;
a luminance sensor for sensing luminance of the object;
a detector for judging whether a proper exposure time of the image pickup device which is calculated by the luminance of the object is longer than a predetermined time period; and
a controller for controlling the image pickup device for taking a plurality of images of the same field of the object by a control exposure time T2 equal to or shorter than the predetermined time period, when the calculated exposure time is longer than the predetermined time period, wherein the control exposure time T2 and the number of image taking operations C are shown by the following equations;

$$C = \text{INT}(T1/T3) \text{ and}$$

$$T2 = T1/C$$

where the symbol T1 designates the proper exposure time, the symbol T3 designates an optional time shorter than a limit exposure time T0 causing a camera shake, and the symbol INT signifies raising fractions to form an integer.

Claims 6-17. (Canceled)

Claim 18. (Currently Amended) A camera system comprising:
an image pickup device for taking an image formed by light flux from an object;

a luminance sensor for sensing luminance of the object;

a detector for judging whether a proper exposure time of the image pickup device which is calculated by from the luminance of the object is longer than a predetermined time period;

a controller for controlling the image pickup device for automatically determining and taking a plurality of images to be subsequently composited of the same field of the object by a control exposure time equal to or shorter than the predetermined time period, when the calculated exposure time is longer than the predetermined time period;

a moving sensor for sensing a quantity of movement of a camera from a position where a first image is taken to a position where the last image is taken when the image is taken more than twice;

a memory for compressing the image data of each of said plurality of images and temporarily storing the compressed image data and data of the quantity of movement corresponding thereto at least until the time when all of the plurality of images have been taken, wherein ~~at least one of a compression ratio of the image data, a method of the data compression and a resolution of the image is changed~~ corresponding to one method of data compression is selected from among a plurality of compression methods which have mutually different compression speeds, in accordance with the automatically determined number of image taking operations;

an image data corrector that corrects the data of each of said plurality of images read from said memory by responding to the quantity of movement after all the image data is taken; and

an image compositor that forms single image data by compositing the corrected image data for each of said plurality of images.

Claim 19. (Currently Amended) A camera system for memorizing image data of a plurality of images to be composited into a single image, in which one image among said plurality of images is designated as a standard image, comprising: a memory region for ~~memorizing~~ storing data; and a controller for compressing image data of said plurality of images except said standard image and for temporarily ~~memorizing~~ storing the compressed image data and the standard image data into the memory region; and wherein

the controller selects a compression ratio and/or a method of the data compression for said plurality of images except said standard image, corresponding to a condition when the image data are taken.

Claim 20. (Previously Presented) The camera system in accordance with claim 19, wherein the condition when the image data are taken is at least one of a luminance of an object, a number of image taking operations, a region from which image data are read out and a time period from a standard time to a time of taking an image.

Claims 21-27. (Canceled)

Claim 28. (Previously Presented) A camera system comprising:

an image pickup device for taking an image formed by light flux from an object, and having an effective region larger than an actual frame size of the image;

a luminance sensor for sensing luminance of the object;

a detector for judging whether a proper exposure time of the image pickup device which is calculated by the luminance of the object is longer than a predetermined time period;

a controller for controlling the image pickup device to take a plurality of images of the same field of the object by a control exposure time equal to or shorter than the predetermined time period, when the calculated exposure time is longer than the predetermined time period,

an image data corrector that corrects the data of each of said plurality of images for rotation shake around each axis of an orthogonal coordinate system that includes an optical axis of an optical lens system, wherein rotation shake around the two axes perpendicular to the optical axis are corrected by execution of a software process which shifts regions from which image data are read, and rotation shake around the optical axis is corrected by a hardware process that rotates image data around the optical axis; and

an image compositor that forms single image data by compositing the corrected image data for each of said plurality of images.

Claim 29. (Previously Presented) A camera system comprising:

an image pickup device for taking an image formed by light flux from an object;

a luminance sensor for sensing luminance of the object;

a detector for judging whether a proper exposure time of the image pickup device which is calculated by the luminance of the object is longer than a predetermined time period;

a controller for controlling the image pickup device to take a plurality of images of the same field of the object by a control exposure time equal to or shorter than the predetermined time period, when the calculated exposure time is longer than the predetermined time period,

an image data corrector that corrects the data of each of said plurality of images for rotation shake around each axis of an orthogonal coordinate system that includes an optical axis of an optical lens system, wherein rotation shake around the two axes perpendicular to the optical axis and rotation shake around the optical axis are corrected by affine conversion at the same time; and

an image compositor that forms single image data by compositing the corrected image data for each of said plurality of images.

Claim 30. (Previously Presented) A camera system comprising:

an image pickup device for taking an image formed by light flux from an object, and having an effective region larger than an actual frame size of the image;

a luminance sensor for sensing luminance of the object;

a detector for judging whether a proper exposure time of the image pickup device which is calculated by the luminance of the object is longer than a predetermined time period;

a controller for controlling the image pickup device to take a plurality of images of the same field of the object by a control exposure time equal to or shorter

than the predetermined time period, when the calculated exposure time is longer than the predetermined time period,

an image data corrector that corrects the data of each of said plurality of images for rotation shake around each axis of an orthogonal coordinate system that includes an optical axis of an optical lens system, wherein rotation shake around the two axes perpendicular to the optical axis are corrected by shifting of a region from which image data is read, which is larger than the actual frame size of the image and which is gradually enlarged corresponding to the increase of the number of image taking operations, and wherein rotation shake around the optical axis is corrected by rotating image data around the optical axis; and

an image compositor that forms single image data by compositing the corrected image data for each of said plurality of images.